SEQUENCE LISTING

<110>	Nuevolution A/S		
<120>	Gene shuffling by template switching		
<130>	P897PC00		
	PCT/DK2003/000490 2003-07-11		
<160>	54		
<170>	PatentIn version 3.1		
<210><211><211><212><213>	1 80 DNA Artificial Sequence		
<220> <223>	Synthetic construct		
<400> gacctc	1 gatc gatcgatcct ttagccctat atttagctaa tccgaatggg caggacttat	60	
atggca	gtag tcatcgcatc	80	
<210><211><212><212><213>			
<220> <223>	Synthetic construct		
<400> gcttac	2 agga cttatatggc agtagtcatc gcatc	35	
<210><211><212><212><213>	3 80 DNA Artificial Sequence		
<220> <223>	Synthetic construct		
<400> gacctc	3 gatc gatcgatcct ttagccctat atttaatcga tccgagctta caggacttat	60	
atggcagtag tcatcgcatc 8			
<210><211><211>	4 80 DNA		

<213>	Artificial Sequence			
<220>				
	Synthetic construct			
400				
<400>	4 gate gategateet ttageeetat gtetggetaa teegagetta eaggaettat	60		
5				
atggcag	gtag tcatcgcatc	80		
<210>	5			
<211>				
<212>				
<213>	Artificial Sequence			
<220>				
<223>	Synthetic construct			
<400>	5			
	gact cactatag	18		
cuucuo				
<210> <211>				
<211>				
	Artificial Sequence			
(213)	Antificial bequence			
<220>				
<223>	Synthetic construct			
<400>	6			
	tcga ccagcatggg	20		
<210>	7			
<211>				
<212>				
<213>	Artificial Sequence			
<220>	Complete in a complete with			
<223>	Synthetic construct			
<400>	7			
taatac	gact cactatagga cctcgatcga tcgatc	36		
<210>	8			
<211>				
<212>				
<213>	Artificial Sequence			
-226				
<220> <223>	Synthetic construct			
\443 >	Synchecic construct			
<400>	8			
gatgcgatga ctactgcc 18				

<210>	9			
<211>	81			
<212>	RNA			
	Artificial Sequence			
<220>				
<223>	synthetic construct			
<400>	9			
ggaccuc	gau cgaucgaucc uuuagcccua uauuuagcua auccgaaugg gcaggacuua	60		
uauggcagua gucaucgcau c 81				
<210>	10			
<211>	81			
<212>	RNA			
<213>	Artificial Sequence			
<220>				
	synthetic construct			
12232	by nenectic competant			
<400>	10			
ggaccu	cgau cgaucgaucc uuuagcccua uauuuagcua accagcgcuu acaggacuua	60		
uauggca	agua gucaucgcau c	81		
23				
<210>	11			
<211>				
<212>				
<213>	Artificial Sequence			
<220>				
<223>	synthetic construct			
<400>	11			
ggaccu	egau egauegauee uuuageeeua uauuuaaueg aueegageuu aeaggaeuua	60		
uauggca	agua gucaucgcau c	81		
<210>	12			
<211>	81			
<212>	RNA			
	Artificial Sequence			
.000				
<220>	aumthotia construct			
<223>	synthetic construct			
<400>	12			
ggaccu	cgau cgaucgaucc uuuagcccua ugucuggcua auccgagcuu acaggacuua	60		
uaugge	agua gucaucgcau c	81		
55-				

<210> 13

```
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 13
                                                                        6
aaggat
<210> 14
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 14
aaagga
                                                                        6
<210> 15
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 15
                                                                        6
taaagg
<210> 16
<211> 6
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 16
                                                                            6
ctaaag
<210> 17
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 17
gctaaa
                                                                            6
<210> 18
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 18
                                                                            6
ggctaa
<210> 19
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
```

```
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 19
                                                                        6
gggcta
<210> 20
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 20
                                                                        6
agggct
<210> 21
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 21
                                                                         6
tagggc
<210> 22
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
      (1) . . (6)
<222>
<223> LNA oligo
```

•

```
<400> 22
                                                                      6
ataggg
<210> 23
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222>
      (1)..(6)
<223> LNA oligo
<400> 23
tatagg
                                                                      6
<210> 24
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 24
                                                                      6
atatag
<210> 25
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 25
aatata
                                                                      6
```

```
<210> 26
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 26
                                                                      6
aaatat
<210> 27
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 27
taaata
                                                                      6
<210> 28
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 28
ctaaat
<210> 29
<211> 6
```

<212> DNA

```
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 29
                                                                      6
gctaaa
<210> 30
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 30
agctaa
<210> 31
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 31
tagcta
<210> 32
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
```

<223> Synthetic construct

6

6

```
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 32
                                                                          6
ttagct
<210> 33
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 33
                                                                          6
attagc
<210> 34
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 34
gattag
                                                                          6
<210> 35
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
```

e,

```
<223> LNA oligo
<400> 35
                                                                          6
ggatta
<210> 36
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 36
                                                                           6
cggatt
<210> 37
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 37
                                                                           6
tcggat
<210> 38
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
      Synthetic construct
<223>
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
```

<400> 38

```
ctcgga
<210> 39
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 39
                                                                       6
gctcgg
<210> 40
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 40
                                                                       6
agctcg
<210> 41
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 41
aagctc
                                                                       6
```

<210> 42

```
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 42
                                                                         6
gtaagc
<210> 43
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 43
gtaagc
                                                                         6
<210> 44
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 44
tgtaag
<210> 45
<211> 6
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 45
ctgtaa
<210> 46
<211> 6
<211> 0
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 46
cctgta
<210> 47
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc feature
<222> (1)..(6)
<223> LNA oligo
<400> 47
tcctgt
<210> 48
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
```

6

6

٠.

<220>

```
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 48
gtcctg
<210> 49
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 49
agtcct
<210> 50
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 50
aagtcc
<210> 51
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
```

6

6

,

```
<400> 51
                                                                     **<sub>.</sub>, 6
taagtc
<210> 52
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 52
ataagt
                                                                         6
<210> 53
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 53
tataag
                                                                         6
<210> 54
<211> 6
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic construct
<220>
<221> misc_feature
<222> (1)..(6)
<223> LNA oligo
<400> 54
atatta
                                                                         6
```

. - 3